Bachelor of Science degree with a major in Forestry — with concentrations in:
- Forest Hydrology
- Forest Operations
- Forest Restoration
- Forest Soils
- Tribal Forestry
- Wildland Fire Management

Minor in Fire Ecology
Minor in Forestry
Minor in Watershed Management

See Natural Resources for details on the Master of Science degree.

Department Chair
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The Program
Students completing this program will have demonstrated:
- understanding of taxonomy, autecology of trees, plant and wood identification; physiology of trees; ecological concepts, ecosystem processes, structure and function; soil formation, classification, composition and properties; silvicultural principles, stand structure and composition; growth and quality of forests and forest health; fire ecology and use of fire; entomology and pathology; wildlife and fish ecology; plant, soil, water interactions, watershed processes, land measurement, mapping, photogrammetry, remote sensing; sampling theory and methods, statistical literacy, measurement of trees, forests, and forest products; wildlife habitat assessment; measurement of water yields and quality; assessment of non-timber forest values; integrated forest management, multiple-use principles; stand scale management; system and landscape management; forest engineering and road design; harvesting systems; utilization; policy development, sociological influences; administration, environmental regulation; land and resource planning; budgeting, finance, personnel management, cost, and economics
- capable practice of critical thinking; writing; quantitative thinking; public speaking, debate and persuasion; leadership; group cooperation; conflict resolution; time management; professional integration; independent life-long learning; computer literacy and skills
- the attributes of adaptability; integrity; open-mindedness; professional decorum.

Humboldt State University is located in the heart of the coast redwood forest. This environment provides outdoor classrooms for more than half of the forestry courses. Field trips illustrate lecture concepts and teach field techniques.

Excellent on-campus laboratories complement the outdoor lab. Students have access to the college forest, the Schatz Tree Farm, public and private forest lands, and various production centers. Because Humboldt County also has a large forest products industry, Humboldt State is an excellent place to study the resolution of environmental issues with economic concerns.

Students and faculty interact with professional forest managers and researchers of the region both in the classroom and in the field.

Forestry is an incorporative discipline, drawing from the biological, physical, social, and managerial sciences. The curriculum aids in understanding the biological complexities of the forest and the interactions between the forest and social and economic demands.

The program provides sufficient background and depth of education to give a sound basis for professional growth within a broad range of forestry-related careers. Our graduates often start as forest rangers, park rangers, fire fighters, timber cruisers, or surveyors. Some hold staff positions in the federal and state agencies, forest products industry, or with environmental organizations. Graduates go on to build careers in: wildland fire management, forest management, forest protection, park management, watershed management, forest biology, forest engineering, industrial management, resource planning, forest restoration, and research and education.

Visit our webpage at fwr.humboldt.edu.

Preparation
In high school, take a broad background in Biological/physical sciences, mathematics, social sciences, and the arts are helpful.

REQUIREMENTS FOR THE MAJOR
For a description of degree requirements to be fulfilled in addition to those listed below for the major, please see “The Bachelor’s Degree” section of the catalog, pp. 67-82. “The Master’s Degree” on page 83.

Unit Requirements
Core units: 64
Concentration units: 28-31
Total units in the major: 92-95
Total units required for the degree: 120

Special Grade Requirement
Students must complete all courses in the major with a C- or better.

Core Courses (64 units)
The following core courses are required for all forestry majors.

Lower Division
Complete at least one course in a basic biological science that meets general education requirements and is comparable to:
Complete the following:
- FOR 130 [3] Dendrology
- FOR 210 [4] Forest Measurements and Biometry
- FOR 223 [2] Intro to Wildland Fire
- FOR 250 [3] Intro to Forest Operations
- SOIL 260 [3] Intro to Soil Science

Take all lower division courses before beginning upper division work.

Upper Division
- ESM 305 [3] Environmental Conflict Resolution
- FOR 311 [4] Forest Mensuration & Growth
- FOR 331 [3] Silvics — Foundation of Silviculture
Concentrations

Complete one concentration to fulfill the requirements of the major.

**Forest Hydrology Concentration (29 units)**

See core courses.

**Lower Division**
- GEOL 109 (4) General Geology
- GSP 216 (3) Intro to Remote Sensing
- GSP 270 (3) Geographic Information Science (GIS)
- MATH 105 (3) Calculus for the Biological Sciences & Natural Resources
- PHYX 106 (4) College Physics: Mechanics & Heat, or PHYX 109 (4) General Physics A: Mechanics

**Upper Division**
- FOR 471 (3) Forest Administration & Ethics
- GEOL 306 (3) General Geomorphology
- SOIL 460 (3) Wildland Soil Management & Erosion Control.
- WSHD 333 (3) Wildland Water Quality, or WSHD 424 (3) Watershed Hydrology

This program meets the qualifications for “Forester” in federal employment.

**Forest Operations Concentration (29 units)**

See core courses.

**Lower Division**
- GSP 216 (3) Intro to Remote Sensing
- GSP 270 (3) Geographic Information Science (GIS)
- FOR 321 (3) Fire Ecology

**Upper Division**
- FISH 300 (3) Intro to Fishery Biology, or RRS 306 (3) Wildland Resource Principles
- FOR 430 (3) Forest Ecosystems
- FOR 471 (3) Forest Administration & Ethics
- FOR 475 (3) Forest Management Decision Making
- FOR 476 (2) Advanced Forest Management

Complete two of the following courses.
- BOT 394 (3) Forest Pathology
- ESM 425 (3) Environmental Impact Assessment
- FOR 350 (3) Forest Harvesting Systems
- FOR 353 (3) Forest Road Location & Design
- FOR 374 (3) Wilderness Area Management
- FOR 423 (3) Wildland Fuels Management
- FOR 431 (3) Forest Restoration
- GSP 370 (3) Intermediate Geographic Information Science (GIS)
- RRS 430 (3) Wildland Restoration & Development
- SOIL 468 (3) Intro to Agroforestry
- WSHD 424 (3) Watershed Hydrology
- WSHD 458 (3) Climate Change & Land Use

This program meets the qualifications for “Forester” in federal employment.

**Forest Soils Concentration (28 units)**

See core courses.

**Lower Division**
- GEOL 109 (4) General Geology
- GSP 216 (3) Intro to Remote Sensing
- GSP 270 (3) Geographic Information Science (GIS)

**Upper Division**
- FOR 471 (3) Forest Administration & Ethics
- SOIL 360 (3) Origin & Classification of Soils
- SOIL 465 (3) Soil Microbiology
- SOIL 467 (3) Soil Physics

This program meets the qualifications for “Forester,” “Soil Scientist,” and “Soil Conservationist” in federal employment.

**Tribal Forestry Concentration (31 units)**

See core courses.

**Lower Division**
- ANTH 105 (3) Archaeology and World Prehistory
- NAS 104 (3) Introduction to Native American Studies
- NAS 200 (3) Indigenous Peoples in US History
- FOR 471 (3) Forest Administration & Ethics
- GSP 370 (3) Intermediate Geographic Information Science (GIS)

**Upper Division**
- FISH 300 (3) Intro to Fishery Biology
- FOR 321 (3) Fire Ecology
- NAS 331 (3) Indigenous Natural Resource Management Practices
- NAS 361 (3) Tribal Sovereignty, Tribal Citizens, or NAS 362 (3) Tribal Governance & Leadership
- NAS 364 (4) Federal Indian Law I, or NAS 365 (4) Federal Indian Law II
- NAS 468 (3) Tribal Justice Systems, or NAS 325 (3) Native Tribes of California

This program meets the qualifications for “Forester” in federal employment.
Wildland Fire Management Concentration [29 units]
See core courses.

Lower Division
GSP 216 (3) Intro to Remote Sensing
GSP 270 (3) Geographic Information Science (GIS)

Upper Division
FISH 300 (3) Intro to Fishery Biology, or
RRS 306 (3) Wildland Resource Principles
FOR 321 (3) Fire Ecology
FOR 323 (3) Wildland Fire Behavior & Use
FOR 423 (3) Wildland Fuels Management
FOR 424 (3) Wildland Fire Internship
FOR 471 (3) Forest Administration & Ethics
FOR 476 (2) Advanced Forest Management

Complete one of the following courses.
FOR 431 (3) Forest Restoration
FOR 475 (3) Forest Management Decision Making
GSP 370 (3) Intermediate Geographic Information Science (GIS)
RRS 370 (3) Wildland Ecology Principles
WHSD 458 (3) Climate Change & Land Use

This program meets the qualifications for "Forester" in federal employment.

REQUIREMENTS FOR THE MINORS

Fire Ecology Minor
Total units required for the minor: 15

 Required Courses
FOR 130 (3) Dendrology, or an approved course in plant taxonomy
FOR 131 (3) Forest Ecology, or an approved course in ecology
FOR 321 (3) Fire Ecology
FOR 323 (3) Wildland Fire Behavior & Use
FOR 423 (3) Wildland Fuels Management

Forestry Minor
Total units required for the minor: 16

Required courses
FOR 130 (3) Dendrology
FOR 131 (3) Forest Ecology
FOR 210 (4) Forest Measurements and Biometry
FOR 315 (3) Forest Management

Complete one of the following four courses.
FOR 302 (3) Forest Ecosystems & People
FOR 321 (3) Fire Ecology
FOR 374 (3) Wilderness Area Mgmt.
FOR 431 (3) Forest Restoration

Watershed Management Minor
See Watershed Management